1. A steerable catheter to selectively engage the ostium of a right coronary artery of a patient, comprising:

a proximal shaft having a proximal end to receive manipulation by a user outside a patient in which the catheter is used, wherein the proximal shaft transmits torque applied at the proximal end; and

a distal shaft extending from the proximal shaft opposite the proximal end of the proximal shaft such that the distal shaft is responsive to torque transmitted by the proximal shaft, the distal shaft including:

a preformed support section including: a transition segment extending from the proximal shaft; and an abutment segment extending from the transition segment such that the abutment segment abuts an interior surface of the ascending aorta of the patient when the catheter is in place within the patient; and

a preformed ostium entry section extending from the support section and including a first segment, extending from the abutment segment, and a second segment, extending from the first segment, wherein in at least a natural state of the catheter outside the patient with the support section in a sagital plane relative to the patient, the first segment lies in such sagital plane or to the patient's right of such sagital plane of the support section when the first segment extends anteriorly from the preformed support section, and the second segment extends back toward such sagital plane.

2. A steerable catheter as defined in claim 1, wherein:

the first segment is connected to the support section such that the first segment is initially disposed at a first angle from the support section and at a second angle from the plane of the support section;

the second segment is connected to the first segment such that the second segment is initially disposed at a third angle from the first segment and at a fourth angle from a plane defined by the first segment and at least a portion of the support section;

the first angle is within the range of about 80° to about 170°;

the second angle is within the range of about 130° to about 180°;

the third angle is within the range of about 90° to about 175°; and

the fourth angle is within the range of about 0° to about 90°.

3. A steerable catheter as defined in claim 2, wherein the transition segment is disposed at one initial angle with the proximal shaft of between about 135° and about 175° and at one initial angle with the abutment segment of between about 135° and about 175° and wherein the transition segment is disposed at another initial angle with the proximal shaft of between about 140° and about 180° and at another initial angle with the abutment segment of between about 140° and about 180°.

4. A steerable catheter as defined in claim 3, wherein:

the transition segment has a length between about 20 millimeters and about 80 millimeters;

the abutment segment has a length between about 5 millimeters and about 40 millimeters;

the first segment has a length between about 5 millimeters and about 55 millimeters; and

the second segment has a length between about 5 millimeters and about 55 millimeters.

5. A steerable catheter as defined in claim 4, wherein the transition segment is twisted relative to the proximal shaft.

6. A steerable catheter as defined in claim 2, wherein:

the transition segment has a length between about 20 millimeters and about 80 millimeters;

the abutment segment has a length between about 5 millimeters and about 40 millimeters;

the first segment has a length between about 5 millimeters and about 55 millimeters; and

the second segment has a length between about 5 millimeters and about 55 millimeters.

7. A steerable catheter as defined in claim 6, wherein the transition segment is twisted relative to the proximal shaft.

8. A steerable catheter as defined in claim 2, wherein the transition segment is twisted relative to the proximal shaft.

9. A steerable catheter as defined in claim 1, wherein the transition segment is twisted relative to the proximal shaft.

10. A steerable catheter as defined in claim 1 wherein the second segment terminates in a distal tip, such that when the proximal shaft is torqued clockwise to engage the distal tip into the

ostium of the right coronary artery, the distal tip follows a plane that includes the abutment section and a point of connection between the first segment and the second segment.

11. A steerable catheter as defined in claim 1 wherein the abutment segment is positioned at least about 5 millimeters above the level of the ostium of the right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

12. A steerable catheter as defined in claim 1 wherein the second segment terminates in a distal tip, such that the abutment segment abuts an interior surface of the patient's ascending aorta in a plane formed by a tangent of an axis of the first segment when the distal tip is positioned within the ostium of the right coronary artery.

13. A steerable catheter as defined in claim 12 wherein the second segment is coaxial to an axis of the right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

14. A catheter for a right coronary artery, comprising:

a proximal shaft having a proximal end to receive manipulation by a user outside a patient in whom the catheter is used; and

a distal shaft extending from the proximal shaft opposite the proximal end of the proximal shaft, the distal shaft including:

a preformed support section to abut a posterior interior surface of the ascending aorta of the patient, wherein the support section includes:

a transition segment connected to the proximal shaft at a first bend initially forming an included angle of between 135° and 175°, wherein the transition segment is initially substantially linear; and

an abutment segment connected to the transition segment at a second bend initially forming an included angle of between 135° and 175°, wherein the abutment segment is initially substantially linear; and

a preformed ostium entry section extending from the preformed support section, wherein the preformed ostium entry section includes:

a first segment connected to the abutment segment at a third bend initially forming an included angle of between 80° and 170°, wherein the first segment is initially substantially linear;

a second segment connected to the first segment at a fourth bend initially forming an included angle of between 90° and 175°,

wherein the second segment is initially substantially linear; and

wherein the first and second segments are initially offset in different directions from an imaginary plane including at least the abutment segment of the preformed support section.

15. A catheter as defined in claim 14, wherein:

the first segment is disposed at an initial angle of 130° to 180° relative to the imaginary plane; and

the second segment is disposed at an initial angle of 0° to 90° from a plane defined by the first segment and the abutment segment of the preformed support section.

16. A catheter as defined in claim 15, wherein:

the transition segment has a length between 20 millimeters and 80 millimeters;

the abutment segment has a length between 5 millimeters and 40 millimeters;

the first segment has a length between 5 millimeters and 55 millimeters; and

the second segment has a length between 5 millimeters and 55 millimeters.

17. A catheter as defined in claim 16, wherein the second segment terminates at a distal tip which enters the ostium of a right coronary artery when the catheter is properly placed in the patient.

18. A catheter as defined in claim 17 wherein the abutment segment is positioned at least about 5 millimeters above the level of the ostium of the right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

19. A catheter as defined in claim 17, wherein there is another bend between the transition segment and the proximal shaft of between 140° and 180° and another bend between the abutment segment and the transition segment of between 140° and 180°.

20. A catheter as defined in claim 19, wherein the transition segment is twisted relative to the proximal shaft.

21. A catheter as defined in claim 14, wherein the second segment terminates at a distal tip which enters the ostium of a right coronary artery when the catheter is properly placed in the patient.

22. A catheter as defined in claim 21, wherein there is another bend between the transition segment and the proximal shaft of between 140° and 180° and another bend between the abutment segment and the transition segment of between 140° and 180°.

23. A catheter as defined in claim 14, wherein there is another bend between the transition segment and the proximal shaft of between 140° and 180° and another bend between the abutment segment and the transition segment of between 140° and 180°.

24. A catheter as defined in claim 14, wherein the transition segment is twisted relative to the proximal shaft.

25. A catheter as defined in claim 14 wherein the second segment terminates in a distal tip, such that when the proximal shaft is torqued clockwise to engage the distal tip into the ostium of the right coronary artery, the distal tip follows a plane that includes the abutment section and a point of connection between the first segment and the second segment.

26. A catheter as defined in claim 14 wherein the abutment segment abuts an interior surface of the patient's ascending aorta in a plane formed by a tangent of an axis of the first segment when the distal tip is positioned within the ostium of the right coronary artery.

27. A catheter as defined in claim 26 wherein the second segment is coaxial to an axis of the right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

28. A three dimensional steerable catheter to engage the ostium of a right coronary artery of a patient comprising:

a proximal shaft; and

a distal shaft extending from the proximal shaft, the distal shaft including:

a preformed support section including: a transition segment extending from the proximal shaft; and an abutment segment extending from the transition segment; and

a preformed ostium entry section extending from the support section and including a first segment, extending from the abutment segment, and a second segment, extending from the first segment, the second segment terminating in a distal tip, such that when the proximal shaft is torqued clockwise to engage the distal tip into the ostium of the right coronary artery, the distal tip follows a plane that includes the abutment section and a point of connection between the first segment and the second segment.

29. The catheter of claim 28 wherein the abutment segment abuts an interior surface of the patient's ascending aorta in a plane formed by a tangent of an axis of the first segment when the distal tip is positioned within the ostium of the right coronary artery.

30. The catheter of claim 28 wherein the second segment is coaxial to an axis of the right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

31. The catheter of claim 28 wherein the transition segment is twisted relative to the proximal shaft.

32. The catheter of claim 28 wherein the abutment segment is positioned at least about 5 millimeters above the level of the ostium of the right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

33. The catheter of claim 28 wherein in at least a natural state of the catheter outside the patient with the support section in a sagital plane relative to the patient, the first segment lies in or to the patient's right of such sagital plane of the support section when the first segment extends anteriorly from the preformed support section, and the second segment extends back toward such sagital plane.

34. The catheter of claim 33 wherein:

the first segment is connected to the support section such that the first segment is initially disposed at a first angle from the support section and at a second angle from the plane of the support section;

the second segment is connected to the first segment such that the second segment is initially disposed at a third angle from the first segment and at a fourth angle from a plane defined by the first segment and at least a portion of the support section;

the first angle is within the range of about 80° to about 170°;

the second angle is within the range of about 130° to about 180°;

the third angle is within the range of about 90° to about 175°; and

the fourth angle is within the range of about 0° to about 90°.

35. The catheter of claim 34 wherein the transition segment is disposed at one initial angle with the proximal shaft of between about 135° and about 175° and at one initial angle with the abutment segment of between about 135° and about 175° and wherein the transition segment is

disposed at another initial angle with the proximal shaft of between about 140° and about 180° and at another initial angle with the abutment segment of between about 140° and about 180°.

36. The catheter of claim 35 wherein:

the transition segment has a length between about 20 millimeters and about 80 millimeters;

the abutment segment has a length between about 5 millimeters and about 40 millimeters;

the first segment has a length between about 5 millimeters and about 55 millimeters; and

the second segment has a length between about 5 millimeters and about 55 millimeters.

37. A three dimensional steerable catheter to selectively engage the ostium of a right coronary artery of a patient comprising:

a proximal shaft having a proximal end to receive manipulation by a user outside the patient in whom the catheter is used, wherein the proximal shaft transmits torque applied at the proximal end; and

a distal shaft extending from the proximal shaft opposite the proximal end of the proximal shaft such that the distal shaft is responsive to torque transmitted by the proximal shaft, the distal shaft including:

a preformed support section including: a transition segment extending from the proximal shaft; and an abutment segment extending from the transition segment; and

a preformed ostium entry section extending from the support section and including a first segment extending from the abutment segment such that the abutment segment abuts an interior surface of the patient's ascending aorta in a plane formed by a tangent of an axis of the first segment when the catheter is positioned within the ostium of the right coronary artery.

38. The catheter of claim 37 wherein the preformed ostium entry section further comprises a second segment, extending from the first segment, the second segment terminating in a distal tip.

39. The catheter of claim 38 such that when the proximal shaft is torqued clockwise to engage the distal tip into the ostium of the right coronary artery, the distal tip follows an imaginary

plane that includes the abutment section and a point of connection between the first segment and the second segment.

40. The catheter of claim 39 wherein the second segment is coaxial to an axis of the patient's right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

41. The catheter of claim 40 wherein the abutment segment is positioned at least about 5 millimeters above the level of the ostium of the right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

42. The catheter of claim 40 wherein the transition segment is twisted relative to the proximal shaft.

43. The catheter of claim 40 wherein in at least a natural state of the catheter outside the patient with the support section in a sagital plane relative to the patient, the first segment lies in or to the patient's right of such sagital plane of the support section when the first segment extends anteriorly from the preformed support section, and the second segment extends back toward such sagital plane.

44. The catheter of claim 43 wherein:

the first segment is connected to the support section such that the first segment is initially disposed at a first angle from the support section and at a second angle from the plane of the support section;

the second segment is connected to the first segment such that the second segment is initially disposed at a third angle from the first segment and at a fourth angle from a plane defined by the first segment and at least a portion of the support section;

the first angle is within the range of about 80° to about 170°;

the second angle is within the range of about 130° to about 180°;

the third angle is within the range of about 90° to about 175°; and

the fourth angle is within the range of about 0° to about 90°.

45. The catheter of claim 44 wherein the transition segment is disposed at one initial angle with the proximal shaft of between about 135° and about 175° and at one initial angle with the abutment segment of between about 135° and about 175° and wherein the transition segment is disposed at another initial angle with the proximal shaft of between about 140° and about 180° and at another initial angle with the abutment segment of between about 140° and about 180°.

46. The catheter of claim 45 wherein:

the transition segment has a length between about 20 millimeters and about 80 millimeters;

the abutment segment has a length between about 5 millimeters and about 40 millimeters;

the first segment has a length between about 5 millimeters and about 55 millimeters; and

the second segment has a length between about 5 millimeters and about 55 millimeters.

47. A three dimensional steerable catheter to engage the ostium of a right coronary artery of a patient comprising:

a proximal shaft; and

a distal shaft extending from the proximal shaft, the distal shaft including:

a preformed support section including: a transition segment extending from the proximal shaft; and an abutment segment extending from the transition segment; and

a preformed ostium entry section extending from the support section and including a first segment, extending from the abutment segment, and a second segment, extending from the first segment, the second segment terminating in a distal tip, such that when the distal tip is positioned in the ostium of the right coronary artery the first segment and the second segment lie anterior to the support section.

48. The catheter of claim 47 such that when the proximal shaft is torqued clockwise to engage the distal tip into the ostium of the right coronary artery, the distal tip follows a plane that includes the abutment section and a point of connection between the first segment and the second segment.

49. The catheter of claim 47 wherein the abutment segment abuts an interior surface of the patient's ascending aorta in a plane formed by a tangent of an axis of the first segment when the distal tip is positioned within the ostium of the right coronary artery.

50. The catheter of claim 47 wherein the second segment is coaxial to an axis of the right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

51. The catheter of claim 47 wherein the transition segment is twisted relative to the proximal shaft.

52. The catheter of claim 47 wherein the abutment segment is positioned at least about 5 millimeters above the level of the ostium of the right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

53. The catheter of claim 47 wherein in at least an initial position of the catheter outside the patient with the support section in a sagital plane relative to the patient, the first segment lies in such sagital plane or to the patient's right of such sagital plane of the support section when the first segment extends anteriorly from the preformed support section, and the second segment extends back toward such sagital plane.

54. The catheter of claim 53 wherein:

the first segment is connected to the support section such that the first segment is initially disposed at a first angle from the support section and at a second angle from the plane of the support section;

the second segment is connected to the first segment such that the second segment is initially disposed at a third angle from the first segment and at a fourth angle from a plane defined by the first segment and at least a portion of the support section;

the first angle is within the range of about 80° to about 170°;

the second angle is within the range of about 130° to about 180°;

the third angle is within the range of about 90° to about 175°; and

the fourth angle is within the range of about 0° to about 90°.

55. The catheter of claim 54 wherein the transition segment is disposed at one initial angle with the proximal shaft of between about 135° and about 175° and at one initial angle with the abutment segment of between about 135° and about 175° and wherein the transition segment is disposed at another initial angle with the proximal shaft of between about 140° and about 180° and at another initial angle with the abutment segment of between about 140° and about 180°.

56. The catheter of claim 55 wherein:

the transition segment has a length between about 20 millimeters and about 80 millimeters;

the abutment segment has a length between about 5 millimeters and about 40 millimeters;

the first segment has a length between about 5 millimeters and about 55 millimeters; and

the second segment has a length between about 5 millimeters and about 55 millimeters.

57. A three dimensional steerable catheter to selectively engage the ostium of a right coronary artery of a patient comprising:

an abutment segment;

a first segment extending from the abutment segment; and

a second segment extending from the second segment, the first segment terminating in a distal tip;

wherein, when the distal tip is positioned within the ostium of the right coronary artery , the abutment segment abuts an interior surface of the patient's ascending aorta in a plane formed by a tangent of an axis of the first segment and the second segment is coaxial to an axis of the patient's right coronary artery.

58. The catheter of claim 57 wherein the abutment segment is positioned at least about 5 millimeters above the level of the ostium of the right coronary artery when the distal tip is positioned within the ostium of the right coronary artery.

59. The catheter of claim 57 further comprising:

a proximal shaft having a proximal end to receive manipulation by a user outside the patient in whom the catheter is used, wherein the proximal shaft transmits torque applied at the proximal end; and

a distal shaft extending from the proximal shaft opposite the proximal end of the proximal shaft such that the distal shaft is responsive to torque transmitted by the proximal shaft, the distal shaft including:

a preformed support section including: a transition segment extending from the proximal shaft; and the abutment segment extending from the transition segment; and

a preformed ostium entry section extending from the support section and including the first segment, the second segment and the distal tip.

60. The catheter of claim 59 such that when the proximal shaft is torqued clockwise to engage the distal tip into the ostium of the right coronary artery, the distal tip follows an imaginary plane that includes the abutment section and a point of connection between the first segment and the second segment.

61. The catheter of claim 59 wherein the transition segment is twisted relative to the proximal shaft.

62. The catheter of claim 59 wherein in at least a natural state of the catheter outside the patient with the support section in a sagital plane relative to the patient, the first segment lies in or to the patient's right of such sagital plane of the support section when the first segment extends anteriorly from the preformed support section, and the second segment extends back toward such sagital plane.

63. The catheter of claim 59 wherein:

the first segment is connected to the support section such that the first segment is initially disposed at a first angle from the support section and at a second angle from the plane of the support section;

the second segment is connected to the first segment such that the second segment is initially disposed at a third angle from the first segment and at a fourth angle

from a plane defined by the first segment and at least a portion of the support section;

the first angle is within the range of about 80° to about 170°;

the second angle is within the range of about 130° to about 180°;

the third angle is within the range of about 90° to about 175°; and

the fourth angle is within the range of about 0° to about 90°.

64. The catheter of claim 63 wherein the transition segment is disposed at one initial angle with the proximal shaft of between about 135° and about 175° and at one initial angle with the abutment segment of between about 135° and about 175° and wherein the transition segment is disposed at another initial angle with the proximal shaft of between about 140° and about 180° and at another initial angle with the abutment segment of between about 140° and about 180°.

65. The catheter of claim 64 wherein:

the transition segment has a length between about 20 millimeters and about 80 millimeters;

the abutment segment has a length between about 5 millimeters and about 40 millimeters;

the first segment has a length between about 5 millimeters and about 55 millimeters; and

the second segment has a length between about 5 millimeters and about 55 millimeters.